

- 1 1. A method for producing an RNA-loaded antigen
2 presenting cell (APC), said method comprising:
3 introducing into an antigen-presenting cell *in vitro*
4 RNA selected from the group consisting of
5 (i) tumor-derived RNA comprising tumor-specific RNA
6 and
7 (ii) pathogen-derived RNA comprising pathogen-
8 specific RNA, thereby producing an RNA-loaded APC.
- 1 2. The method of claim 1, wherein said APC is a
2 dendritic cell.
- 1 3. The method of claim 1, wherein said APC is a
2 macrophage.
- 1 4. The method of claim 1, wherein said APC is an
2 endothelial cell.
- 1 5. The method of claim 1, wherein said APC is an
2 artificially generated APC.
- 1 6. The method of claim 1, wherein said RNA is
2 tumor-derived RNA that comprises poly A⁺ RNA.
- 1 7. The method of claim 1, wherein said RNA is
2 tumor-derived RNA that comprises cytoplasmic RNA.

1 8. The method of claim 1, wherein said RNA
2 corresponds to a tumor antigen.

1 9. The method of claim 1, wherein said RNA
2 corresponds to a pathogen antigen.

1 10. The method of claim 1, wherein said RNA
2 corresponds to an epitope.

1 11. The method of claim 1, wherein said RNA is
2 tumor-specific RNA.

1 12. The method of claim 1, wherein the RNA is
2 introduced into the APC by contacting the APC with the RNA
3 in the presence of a cationic lipid.

1 13. The method of claim 1, wherein said RNA is
2 tumor-derived RNA that is provided as a fractionated tumor
3 extract that is fractionated with respect to a non-RNA
4 component of the tumor.

1 14. An RNA-loaded APC produced by the method of
2 claim 1.

1 15. A method for treating or preventing tumor
2 formation in a patient, said method comprising
3 administering to the patient a therapeutically
4 effective amount of the RNA-loaded APC of claim 14, wherein
5 tumor-derived RNA is introduced into said APC.

1 16. The method of claim 15, wherein the tumor-
2 derived RNA is derived from said patient.

1 17. The method of claim 15, wherein the tumor-
2 derived RNA is derived from a donor patient.

1 18. A method for treating or preventing a pathogen
2 infection in a patient, said method comprising
3 administering to the patient a therapeutically
4 effective amount of the RNA-loaded APC of claim 14, wherein
5 pathogen-derived RNA is introduced into said APC.

1 19. A method for producing a cytotoxic T lymphocyte
2 (CTL), said method comprising:
3 providing a T lymphocyte;
4 contacting said T lymphocyte *in vitro* with the RNA-
5 loaded APC of claim 14; and
6 maintaining said T lymphocyte under conditions
7 conducive to CTL proliferation, thereby producing a CTL.

1 20. A CTL produced by according to the method of
2 claim 19.

1 21. A method for treating or preventing tumor
2 formation in a patient, said method comprising administering
3 to the patient a therapeutically effective amount of the CTL
4 of claim 20, wherein said APC is loaded with tumor-derived
5 RNA.

1 22. The method of claim 21, wherein the T
2 lymphocyte is derived from said patient.

1 23. The method of claim 21, wherein the T
2 lymphocyte is derived from a donor patient.

1 24. The method of claim 21, wherein the tumor-
2 derived RNA is derived from a tumor of said patient.

1 25. The method of claim 21, wherein the tumor-
2 derived RNA is derived from a donor patient.

1 26. A method for treating or preventing pathogen
2 infection in a patient, said method comprising administering
3 to the patient a therapeutically effective amount of the CTL
4 of claim 15, wherein said APC is loaded with pathogen-
5 derived RNA.

1 27. The method of claim 1, wherein the tumor-
2 derived RNA is derived from a melanoma.

1 28. The method of claim 1, wherein the tumor-
2 derived RNA is derived from a bladder tumor.

1 29. The method of claim 1, wherein the tumor-
2 derived RNA is derived from a tumor selected from the group
3 consisting of breast cancer tumors, colon cancer tumors,
4 prostate cancer tumors, and ovarian cancer tumors.

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1 30. The method of claim 1, wherein said pathogen-
2 derived RNA is derived from a virus.

1 31. The method of claim 30, wherein said virus is
2 selected from the group consisting of Hepatitis viruses,
3 human immunodeficiency viruses, influenza viruses,
4 poliomyelitis viruses, measles viruses, herpes viruses,
5 mumps viruses, and rubella viruses.

1 32. The method of claim 1, wherein said pathogen-
2 derived RNA is derived from a bacterium.

1 33. The method of claim 32, wherein said bacterium
2 is selected from the group consisting of *Salmonella*,
3 *Shigella*, and *Enterobacter*.

1 34. The method of claim 1, wherein said pathogen-
2 derived RNA is derived from an intracellular pathogen.

1 35. The method of claim 1, wherein said RNA is
2 isolated from a cell.

1 36. The method of claim 1, wherein said RNA is
2 prepared by PCR amplification and *in vitro* transcription.

1 37. The method of claim 1, wherein said RNA is
2 tumor-derived RNA that comprises nuclear RNA.

- 1 38. The method of claim 1 wherein said RNA
- 2 corresponds to a minigene.